CHAPTER 1

INTRODUCTION

1.1 Introduction

University Malaysia Pahang (UMP) sports center is the main placed for the students and staff for doing their activities, such as playing squash, badminton, football and basketball. The UMP sports center provides two squash courts to the student and staff to use. They must make a reservation and pay with affordable price to use the court. Users must pay for RM 1.00 (Student) and RM 5.00 (Staff) for one hour. The concept to make a reservation is first come, first serve. Unfortunately, the manual reservation has many vulnerabilities. After doing some interview session with Mr Azizi as assistant administration in the UMP sports center, there have been issues that the customer using squash games without doing any reservation and payment. Furthermore, the customer will extend the games until the next customer comes in. This situation occurs because lack of the surveillance from the staff to monitor the court. The customer will take these advantages because of vulnerabilities in the UMP reservation management. Moreover, staff needs to print reservation form every day and write manually the available squash court using notice board.

So in this project, we will design and try to develop the system which will provide the user to display a countdown timer using the LED screen. This system will have the sound beam that notifies the user that the time is running out. Furthermore, this system will turn off the lamp automatically when the time is running out to avoid customer to play ‘FREE’ games.

1.2 Problem Statement

i. User (student and staff) using squash court without permissions and payment.
ii. User (student and staff) does not alert when the time is running out.
iii. Admin who handles reservation need to print and write manually using the notice board for court information every day.

1.3 Objectives

The objectives for developing this project are:

i. To display countdown timer for each squash courts to users.
ii. To control the light and sound for UMP Squash Reservation System
iii. To enhance the manual reservation form by using a system.

1.4 Scope

a) User

- University Malaysia Pahang (UMP) staff and student will become the user for this application.

b) Technology

- PHP, Jquery, Javascript, Android studio and Adruino UNO as a controller to control the light and sound.

c) Feature

- Provide automatic on/off lamp and thermal printer to print receipt.
- Sound beam to notify the customer that the time is running out.
- Provide a countdown timer using digital LED screen.

1.5 Thesis Organization

This thesis consists of seven (7) chapters. First (1st) chapter will discuss on the introduction of the project, second (2nd) chapter will discuss about the project literature review from related materials, the third (3rd) chapter will cover on the methodology used through the project, fourth (4th) chapter will shows the implementation and result discussion and fifth (5th) chapter will conclusion. The list of chapter same as below:

i. Chapter 1 (INTRODUCTION)
ii. Chapter 2 (LITERATURE REVIEW)
iii. Chapter 3 (METHODOLOGY)
iv. Chapter 4 (IMPLEMENTATION AND RESULT DISCUSSION)
v. Chapter 5 (CONCLUSION)
vi. REFERENCES
vii. APPENDICES